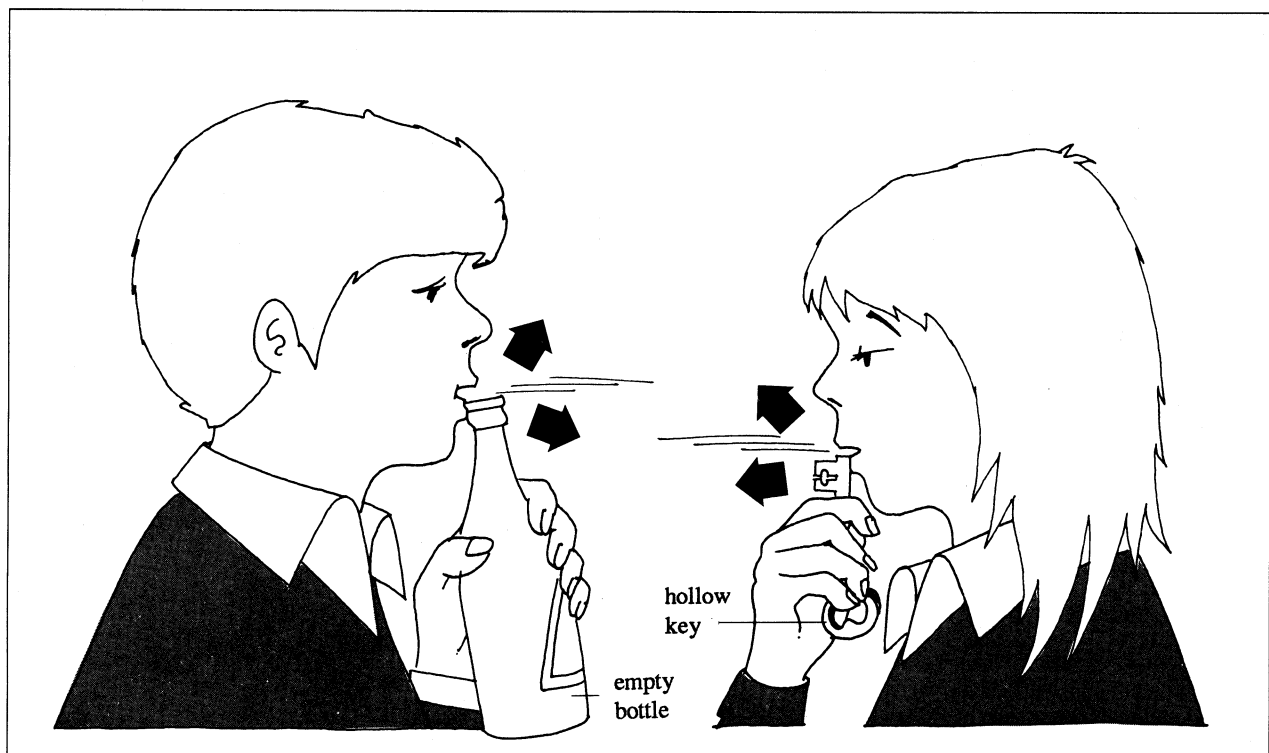


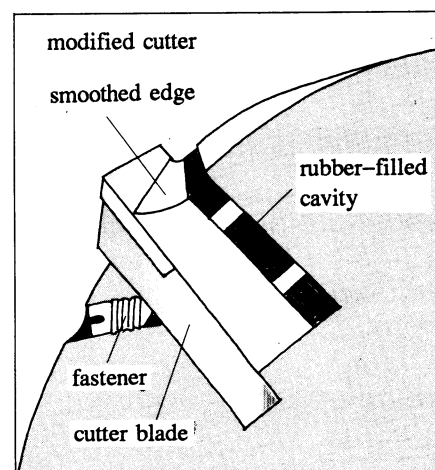
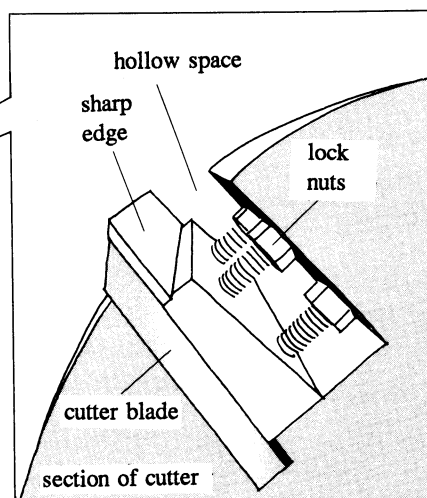
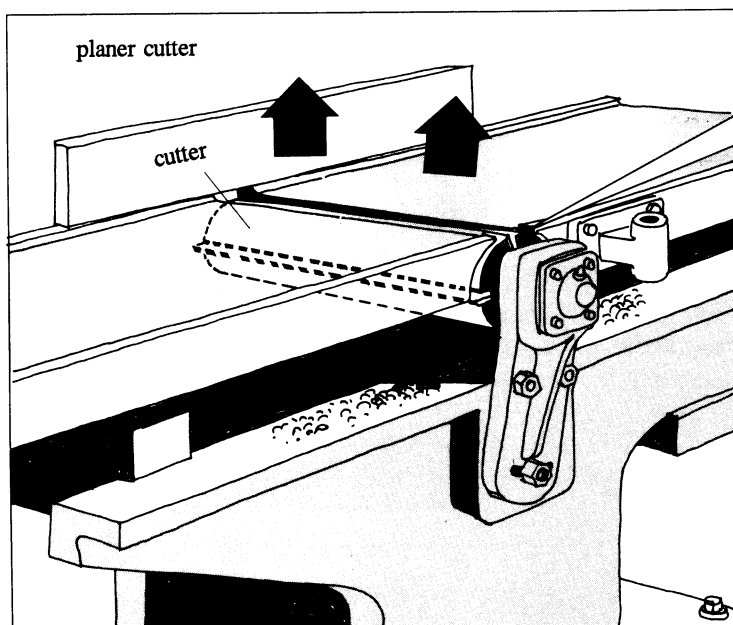
AIR FLOW PAST HOLLOW OPENINGS SHOULD BE AVOIDED

When air or another gas is blown at certain speeds across the edges of an opening to a cavity, loud pure tones are generated. This is how wind instruments operate. The greater the volume of the cavity and the smaller the opening, the lower the frequency will be.

Principle



Application with air and steam jets/objects in rapid motion



Example

When a cutter wheel revolves under no-load conditions, strong pure tones can arise from the track for holding the cutter blade. Eddies at the blade edge generate narrow band noise. Some of the frequencies in the narrow band noise may be amplified by a cavity resonance.

Control Measure

Smoothing the cutter edge and filling the empty space may reduce the broad band noise and may also eliminate the pure tones.